

Patent
674537-2001

AMENDMENT

Please amend the application without prejudice, without admission, without surrender of subject matter and without intention of creating any estoppel as to equivalents, as follows.

In the Claims

1-65. (Cancelled)

66. (Currently amended) ~~[[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the binding region has a K_D for the antibody of the first species, or a group provided thereon, of less than 10⁻⁶ M, and wherein the bifunctional molecule is bound to a location on the antibody of the first species or to one or more non-naturally occurring groups provided thereon, which does not hinder binding between the antibody and its specific antigen.~~

67. (Currently amended) ~~[[A]] The complex according to claim 66 in which the binding region has a K_D for the antibody of the first species, or a group provided thereon, of less than 10⁻⁸ M.~~

68. (Cancelled)

69. (Currently amended) ~~[[A]] The complex according to claim [[68]] 103, in which the binding region is a protein selected from the group consisting of, *Streptococcal* protein G, *Staphylococcal aureus* protein A, and *Peptostreptococcus magnus* protein L, or a fragment thereof.~~

70 (Currently amended) ~~[[A]] The complex according to claim 69, in which the binding region comprises fragment B of *Staphylococcus aureus* protein A.~~

71. (Currently amended) ~~[[A]] The complex according to claim [[68]] 103, in which the binding region comprises a mouse Fc γ receptor or fragment thereof.~~

72. (Currently amended) ~~[[A]] The complex according to claim [[68]] 103, in which the binding region comprises histidine rich glycoprotein.~~

73. (Currently amended) ~~[[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which~~

Patent
674537-2001

~~binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the binding region binds to one or more non-naturally occurring groups provided on the constant region of the antibody of the first species, in a location which does not hinder binding between the antibody and its specific antigen.~~

74. (Cancelled)

75. (Currently amended) [[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the constant region from the antibody of the second species comprises one or more constant domains from an IgM antibody, and wherein the bifunctional molecule is bound to a location on the antibody of the first species or to one or more non-naturally occurring groups provided thereon, which does not hinder binding between the antibody and its specific antigen.

76. (Currently amended) [[A]] The complex according to claim 75, in which the constant region from the antibody of the second species comprises one or more C_H3 μ domains.

77. (Currently amended) [[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the constant region from the antibody of the second species comprises one or more constant domains from an IgG antibody, and wherein the bifunctional molecule is bound to a location on the antibody of the first species or to one or more non-naturally occurring groups provided thereon, which does not hinder binding between the antibody and its specific antigen.

78. (Currently amended) [[A]] The complex according to claim 77, in which the constant region from the antibody of the second species comprises one or more C_H3 γ domains.

Patent
674537-2001

79. (Currently amended) [[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the constant region from the antibody of the second species comprises one or more constant domains from an IgA antibody, and wherein the bifunctional molecule is bound to a location on the antibody of the first species or to one or more non-naturally occurring groups provided thereon, which does not hinder binding between the antibody and its specific antigen.

80. (Currently amended) [[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the antibody constant region from the antibody of the second species comprises or consists of a non-naturally occurring combination of immunoglobulin C_H domains or epitopes thereof, and wherein the bifunctional molecule is bound to a location on the antibody of the first species or to one or more non-naturally occurring groups provided thereon, which does not hinder binding between the antibody and its specific antigen.

81. (Currently amended) [[A]] The complex according to claim [[65]] 103, in which the antibody constant region comprises or consists of a single C_H domain.

82. (Currently amended) [[A]] The complex according to claim [[65]] 103, in which the first species is a rat or mouse.

83. (Currently amended) [[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the second species is a human, and wherein the bifunctional molecule is bound to a location on the antibody of the first

Patent
674537-2001

~~species or to one or more non-naturally occurring groups provided thereon, which does not hinder binding between the antibody and its specific antigen.~~

84-102. (Cancelled)

103. (Previously presented) A complex formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the bifunctional molecule is bound to the constant region of the antibody of the first species or to one or more non-naturally occurring groups provided thereon, wherein the non-naturally occurring group is a biotin molecule and the binding region comprises streptavidin or a fragment thereof.

104. (Currently amended) [[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species or to one or more non-naturally occurring groups provided thereon, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the binding region and the constant region from the antibody of the second species are linked directly or are separated by a linker molecule of between 1 and 20 amino acids in length, and wherein the bifunctional molecule is bound to the constant region of the antibody of the first species or to one or more non-naturally occurring groups provided thereon, wherein the non-naturally occurring group is a biotin molecule and the binding region comprises streptavidin or a fragment thereof.

105. (Currently amended) [[A]] The complex according to claim 103, formed between (i) an antibody or biologically active fragment thereof from a first species and (ii) a bifunctional molecule, the bifunctional molecule comprising a binding region of non-antibody origin which binds to the antibody of the first species, and a constant region from an antibody of a second species, the constant region comprising at least one C_H domain or an epitope thereof, wherein the bifunctional molecule is bound to the constant region of the antibody of the first species.